Applicant: Noriaki SAKAMOTO et al. Attorney's Docket No.: 10417-049001 / F51Serial No.: 09/678 142 124046M/HW

Serial No.: 09/678,142 Filed: October 3, 2000

Page

: 2 of 11

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-3. (Canceled)

- 4. (Currently amended) The sheet-like board member as defined in claim 10, further comprising:
- a wiring disposed on said second planar surface, wherein the mask is formed on a region corresponding to the wiring integrally connected to one or more of the first pads.
- 5. (Currently amended) The sheet-like board member as defined in claim 10, wherein the first pads are bonding pads or pads on which solder balls are to be fixed.
- 6. (Currently amended) The sheet-like board member as defined in claim 10, wherein the conductive coating film is disposed in the semiconductor element mount region to form a die pad.
- 7. (Currently amended) The sheet-like board member as defined in claim 10, wherein the conductive coating film is disposed on the second planar surface to form a passive element die pad and/or outer lead electrode.
- 8. (Previously presented) The sheet-like board member as defined in claim 7, wherein a passive element to be placed on the passive element die pad comprises a chip resistor or a chip capacitor.

Attorney's Docket No.: 10417-049001 / F51-· Applicant: Noriaki SAKAMOTO et al.

124046M/HW

Serial No.: 09/678,142 : October 3, 2000 Filed

Page : 3 of 11

9. (Currently amended) The sheet-like board member as defined in claim 10, wherein patterns which are substantially identical with guide pins or guide holes into which the guide pins are inserted are formed in mutually-opposing side of the sheet-like board member.

10. (Currently amended) The A sheet-like board member comprising: as defined in claim 1,

a first planar surface;

a second planar surface disposed opposite to the first surface, said second planar surface having a semiconductor element mount region defined thereon; and

a mask disposed on the second planar surface and having a pattern corresponding to a plurality of first pads formed in or in the vicinity of the semiconductor element mount region, said mask comprising a conductive film,

wherein the sheet-like board member comprises a pressed is made of metal.

- 11. (Currently amended) The sheet-like board member as defined in claim 10, wherein the sheet-like board member is formed from a conductive foil, and the conductive film is formed of a material different from that of the conductive foil.
 - 12. (Currently amended) A sheet-like board member comprising:
 - a first planar surface;
 - a second planar surface disposed opposite to the first planer surface;
 - a protuberance [s] formed on said second planar surface;
 - a conductive film on each of said protuberances,

wherein the protuberance [s] comprises a plurality of first pads in or in the vicinity of a semiconductor element mount region defined on the second planar surface, and wherein the sheet-like board member is made of metal.

Applicant: Noriaki SAKAMOTO et al. Attorney's Docket No.: 10417-049001 / F51Serial No.: 09/678 142

Serial No.: 09/678,142 Filed: October 3, 2000

Page : 4 of 11

13. (Currently amended) The sheet-like board member as defined in claim 12, wherein the protuberance [s] comprises wirings integrally formed with the first pads.

- 14. (Currently amended) The sheet-like board member as defined in claim 13, wherein the protuberance [s] comprises second pads integrally formed with the wirings.
- 15. (Previously presented) The sheet-like board member as defined in claim 12, wherein the first pads comprise bonding pads, or pads on which solder balls or bumps are mounted.
- 16. (Currently amended) The sheet-like board member as defined in claim 12, wherein the protuberance [s] comprises die pads provided in the semi-conductor element mount region.
- 17. (Currently amended) The sheet-like board member as defined in claim 12, wherein the protuberance [s] comprises passive element die pads and/or outer lead electrodes.
- 18 (Previously presented) The sheet-like board member as defined in claim 17, wherein a passive element to be disposed on the passive element die pad comprises a chip resistor or chip capacitor.
- 19. (Previously presented) The sheet-like board member as defined in claim 12, wherein patterns which are substantially identical with guide pins or guide holes into which the guide pins are inserted are formed in mutually-opposing sides of the sheet-like board member.
- 20. (Currently amended) The sheet-like board member as defined in claim 12 [,] comprising wherein the protuberances are arranged in a plurality of patterns as a unit, and wherein the unit is arranged in a matrix pattern on the sheet-like board member.

 Applicant : Noriaki SAKAMOTO et al.
 Serial No. : 09/678.142
 Attorney's Docket No.: 10417-049001 / F51-124046M/HW

Serial No.: 09/678,142 Filed: October 3, 2000

Page : 5 of 11

21. (Previously presented) The sheet-like board member as defined in claim 12, wherein the sheet-like board member comprises mainly Cu, A1, an Fe-Ni alloy, a Cu-A1 multi-layered member, or an A1-Cu-A1 multi-layered member.

- 22. (Currently amended) The sheet-like board member as defined in claim 12 [,] wherein the comprising a conductive coating film is formed of material different from that of the protuberance [s] and formed on an the upper surface [s] of the protuberance [s].
- 23. (Currently amended) The sheet-like board member as defined in claim 12, wherein <u>a</u> side surface [s] of the protuberance [s] <u>have has</u> an anchoring structure.
- 24. (Amended) The sheet-like board member as defined in claim 12, further comprising:

 the <u>a</u> conductive film comprising an anvil-shaped structure in the vicinity of a top surface of each the protuberance.
- 25. (Amended) The sheet-like board member as defined in claim 12 <u>comprising a</u> <u>conductive film on the protuberance</u>, wherein the conductive film comprises Ni, Au, Ag or Pd.
 - 26. (Previously presented) A sheet-like board member comprising:
 - a planar surface;
- a sheet-like front side of predetermined thickness which is provided on the planar surface;
- a plurality of first pads formed in or in the vicinity of a semiconductor element mount region defined on the planar surface;

protuberances formed on said planar surface and include wirings integrally formed with the first pads, said plurality of first pads and said protuberances formed within an abutting region

. Applicant : Noriaki SAKAMOTO et al. Attorney's Docket No.: 10417-049001 / F51-Serial No.: 09/678.142 124046M/HW

Serial No.: 09/678,142 Filed: October 3, 2000

Page : 6 of 11

defined on said planar surface, said abutting region provided to contact with an upper metal

mold.

27-31. (Cancelled)

32. (Previously presented) The sheet-like board member of claim 26, wherein said planar

surface having the protuberances, some of which semiconductor elements are disposed thereon,

are all encapsulated in plastic.

33. (Currently amended) A sheet-like board member comprising:

a first planar surface;

a second planar surface disposed opposite to the first surface, said second planar surface

having a semiconductor element mount region defined thereon; and

a mask for etching disposed on the second planar surface and having a pattern

corresponding to a plurality of first pads formed in or in the vicinity of the semiconductor

element mount region,

wherein the sheet-like board member is made of metal..

34. (Currently amended) The sheet-like board member as defined in claim 10, wherein

the mask comprises a photoresist.

35. (Currently amended) The sheet-like board member as defined in claim 10, wherein

the mask comprises a conductive film.

36. (Previously presented) The sheet-like board member as defined in claim 33, further

comprising:

Applicant: Noriaki SAKAMOTO et al.

Attorney's Docket No.: 10417-049001 / F51Serial No.: 09/678 142

Serial No.: 09/678,142 Filed: October 3, 2000

Page : 7 of 11

a wiring disposed on said second planar surface, wherein the mask is formed on a region

corresponding to the wiring integrally connected to one or more of the first pads.

37. (Previously presented) The sheet-like board member as defined in claim 33, wherein

the first pads are bonding pads or pads on which solder balls are to be fixed.

38. (Previously presented) The sheet-like board member as defined in claim 33, wherein

the conductive coating film is disposed in the semiconductor element mount region to form a die

pad.

39. (Previously presented) The sheet-like board member as defined in claim 33, wherein

the conductive coating film is disposed on the second planar surface to form a passive element

die pad and/or outer lead electrode.

40. (Previously presented) The sheet-like board member as defined in claim 39, wherein

a passive element to be placed on the passive element die pad comprises a chip resistor or a chip

capacitor.

41. (Previously presented) The sheet-like board member as defined in claim 33, wherein

patterns which are substantially identical with guide pins or guide holes into which the guide

pins are inserted are formed in mutually-opposing side of the sheet-like board member.

42. (Previously presented) The sheet-like board member as defined in claim 33, wherein

the sheet-like board member comprises a pressed metal.

43. (Previously presented) The sheet-like board member as defined in claim 33, wherein

the sheet-like board member is formed from a conductive foil, and the conductive film is formed

of a material different from that of the conductive foil.

- Applicant : Noriaki SAKAMOTO et al. Attorney's Docket No.: 10417-049001 / F51-Serial No.: 09/678 142

Serial No.: 09/678,142

Filed: October 3, 2000

Page : 8 of 11

44. (New) The sheet-like board member as defined in claim 10 wherein the sheet-like board is partially etched in an area not covered by the mask.

- 45. (New) The sheet-like board member as defined in claim 10 wherein a positioning mark is provided on the sheet-like board member.
- 46. (New) The sheet-like board member as defined in claim 45 wherein the positioning mark is formed by partially etching the sheet-like board member.
- 47. (New) The sheet-like board member as defined in claim 10, wherein a guiding hole is formed with the sheet-like board member.
- 48. (New) The sheet-like board member as defined in claim 12 wherein the sheet-like board is partially etched in an area not covered by the conductive film.
- 49. (New) The sheet-like board member as defined in claim 12 wherein a positioning mark is provided on the sheet-like board member.
- 50. (New) The sheet-like board member as defined in claim 49 wherein the positioning mark is formed by partially etching the sheet-like board member.
- 51. (New) The sheet-like board member as defined in claim 12 wherein a guiding hole is formed with the sheet-like board member.
- 52. (New) The sheet-like board member as defined in claim 12 comprising a conductive film formed on the protuberance.

- Applicant: Noriaki SAKAMOTO et al. Attorney's Docket No.: 10417-049001 / F51-

124046M/HW

Serial No.: 09/678,142 Filed: October 3, 2000

Page : 9 of 11

53. (New) The sheet-like board member as defined in claim 12 wherein an Ag plating is formed on the protuberance.

- 54. (New) The sheet-like board member as defined in claim 26 wherein a positioning mark is provided on the sheet-like board member.
- 55. (New) The sheet-like board member as defined in claim 54 wherein the positioning mark is formed by partially etching the sheet-like board member.
- 56. (New) The sheet-like board member as defined in claim 26 wherein a guiding hole is formed with the sheet-like board member.
- 57. (New) The sheet-like board member as defined in claim 33 wherein the sheet-like board is partially etched in area not covered by the mask.
- 58. (New) The sheet-like board member as defined in claim 33 wherein a positioning mark is provided on the sheet-like board member.
- 59. (New) The sheet-like board member as defined in claim 58 wherein the positioning mark is formed by partially etching the sheet-like board member.
- 60. (New) The sheet-like board member as defined in claim 33 wherein a guiding hole is formed with the sheet-like board member.
- 61. (New) A method of manufacturing a semiconductor device comprising: preparing a sheet-like board member as defined in any one of claims 10, 12, 26, 33 and 44-60;

Applicant: Noriaki SAKAMOTO et al.
 Attorney's Docket No.: 10417-049001 / F51-

124046M/HW

Serial No.: 09/678,142 Filed: October 3, 2000

Page : 10 of 11

partially etching the second planar surface of the sheet-like member so as to form the first pads;

disposing a circuit element onto a portion on the sheet-like board member; molding a surface of the sheet-like board member by an insulating resin so that the sheet-like board member is covered.

- 62. (New) The method of manufacturing a semiconductor device according to claim 61 wherein the sheet-like board member is fixed by means of vacuum suction.
- 63. (New) A method of manufacturing a semiconductor device comprising:

 preparing a sheet-like board member as defined in any one of claims 12 and 26;

 disposing a circuit element onto a portion of the protuberances of the sheet-like board member;

molding a surface of the sheet-like board member by an insulating plastic so that the sheet-like board member is covered.

64. (New) The method of manufacturing a semiconductor device according to claim 63 wherein the sheet-like board member is fixed by means of vacuum suction.